

Maine Department of Environmental Protection

Tanks In Maine

News for Those Who Install, Inspect or Manage Underground or Aboveground Tanks in Maine

Volume 2, Issue 1

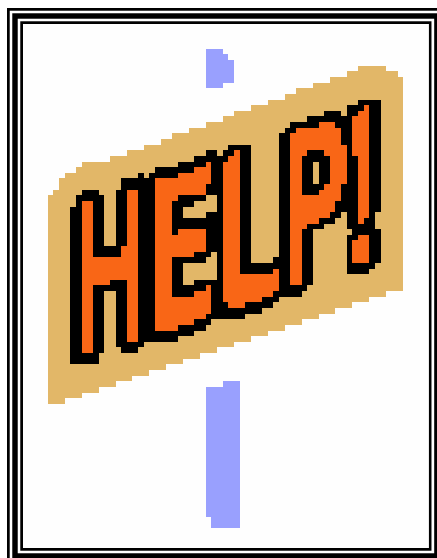
May 2006

Wanted: Volunteers to Help Shape a New Apprenticeship Program

The Board of Underground Storage Tank Installers believes it is time to have a second look at the underground storage tank installer apprenticeship program as it now exists. As currently mandated by statute, the program requires an apprentice to assist on six (6) full installations of underground oil storage facilities to become eligible to take the final examination and become certified as an underground tank installer. If an applicant wishes to be certified as a Class 2 installer, these must be marketing and distribution or motor fuel facilities. If the applicant desires a Class 3 certificate, these must be facilities used for the on-site consumption of number 2 heating oil.

The statutes establishing this framework became effective in the early 1990's, at the same time deadlines for removal or replacement of existing facilities were in effect. Those deadlines created a market and a demand for full installations and thus opportunities for apprentices to complete the installations required of them. However, since those deadlines have passed in 1997, the opportunities for full installations have rapidly disappeared, and with them the abilities of apprentices to obtain the experience they need to obtain full certification. Coincident with the deadlines, the Board's certification of installers declined noticeably.

At the same time, the Board continues to believe that some form of structured field experience that is mentored by a fully certified installer is critical to developing an applicant into an experienced professional. The Board wishes to develop a structured format to apply field experience to an apprenticeship program that is workable, both in developing skills and in availability. To that end, we would like to establish a work



group of certified installers to develop such a structure for the apprenticeship requirement.

Since the current structure is codified in statute, it will take action by the Legislature in order to revise it. Therefore, we are under a deadline of late summer to develop some form of proposal that could be submitted for consideration by a Legislature that would convene in January 2007. As such, the work group will need to convene periodically during this construction season in order to meet that timeline.

If you are willing to help us, please contact Jim Hynson by telephone at 207/287-7889 or by email at james.r.hynson@maine.gov. Also contact us if you have any ideas for any part of a workable structure for apprenticing to become a certified tank installer. We would like to have a group set up in June at the latest.

Thanks.

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Notice of Agency Rulemaking Proposal

AGENCY: Board of Underground Storage Tank Installers

RULE TITLE OR SUBJECT:

CHAPTER 1: Administrative Rules (Amendment)

CHAPTER 3: Certification of Underground Tank Installers (Amendments)

CHAPTER 5: Certification of Underground Gasoline Tank Removers (Amendments)

CHAPTER 6: Certification of Underground Oil Storage Tank Inspectors (Amendments)

PROPOSED RULE NUMBERS: 2006-P107

2006-P108

2006-P109

2006-P110

CONCISE SUMMARY (UNDERSTANDABLE BY AVERAGE CITIZEN):

The Board seeks to amend ethical standards of practice for installers, removers, and inspectors, to require certified persons having knowledge of violations of the Board's enabling statute to provide the Board information and assistance necessary to the final determination of such violations. The Board further seeks to amend the certification processes for installers, removers, and inspectors to allow the Board to

examine and evaluate an applicant's record with its own files and other government agencies in addition to the State Police and other licensing boards to evaluate the applicant's ethical practice, and to enact procedural provisions to specify how an applicant may obtain their examination scores and review their papers relating to their examination..

THIS RULE WILL__ WILL NOT_XX_ HAVE A FISCAL IMPACT ON MUNICIPALITIES.

STATUTORY AUTHORITY: 32 MRSA § 10004.2, § 10011.4.

DEADLINE FOR COMMENTS: July 10, 2006

AGENCY CONTACT PERSON: James Hynson, Staff

AGENCY NAME: Maine Board of Underground Storage Tank Installers

ADDRESS: c/o Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333
TELEPHONE: 207/287-7889

Is That UST Facility's Well a Public Drinking Water Supply?

New gasoline and diesel fuel retail facilities in Maine commonly include a fast-food or other type of restaurant. In some cases, the facility will rely on its own drinking water

supply well, especially where it cannot connect to a municipal water line. Although the facility's well is not a factor in meeting DEP's UST siting requirements, the well is still regulated as a "transient public drinking water supply" because the water will be served to the public either in beverages, food or through the preparation of food. The Drinking Water Program in the Maine Department of Health and Human Services oversees public water supplies under its laws and regulations, and the Federal Safe Drinking Water Act. When assisting a client in the planning of a new facility or the expansion of an exist-

ing one, please be sure to advise them if the above circumstances apply, that they need to obtain the necessary water supply permit by contacting the Maine Drinking Water Pro-

gram at (207) 287-2070. This should be done at the same time the planning of the UST locations and other parts of the facility are being designed and located.

**The facility's own well
should be located and
monitored to ensure it is
providing safe water to the
public.**

This can avoid costly problems in the future for the facility owner. There have been several cases where no such approval was obtained and unnecessary added costs resulted when discovered later. In one case the well was located within 20 feet of the dispensers and may need to be abandoned and relocated. Not surprisingly, this well is already contaminated. In another case, the well was placed too close to the facility's septic system.

The facility's own well should be located and monitored to ensure it is providing safe water to the public. The Maine Drinking Water Program can help reduce the health risks to that well and the facility's customers. In addition to the telephone number provided above, the

Drinking Water Program can be contacted by mail at 11 State House Station, Augusta, ME 04333. Their physical location is 286 Water Street; Key Plaza, 3rd Floor; Augusta, Maine.

Transitioning from MtBE to Ethanol; Guidance for Gasoline Storage Tank Owners, Installers, and Inspectors

This article is adapted from an Environmental Fact Sheet (WMD-REM-26 2006) prepared by the New Hampshire Department of Environmental Services to assist in their transition from MtBE to ethanol in reformulated gasoline (RFG). The complete fact sheet is available at New Hampshire's internet web-site, www.des.state.nh.us/factsheets/rem/rem-26.htm. While ethanol is replacing MtBE in RFG to meet the Clean Air Act requirements for reducing air toxics, alkylates can be used to improve fuel octane without requiring ethanol. Since Maine does not require RFG, it therefore does not need to replace MtBE with ethanol.

Ethanol, because of its tendency to absorb water, must be blended at the terminal and can not be transported any great distances and not by pipeline. There is no existing infrastructure to blend ethanol at the Maine terminals but we are receiving conflicting information as to suppliers' future plans. Maine receives conventional fuel with a 7.8 Reid Vapor Pressure (lower volatility) during ozone season in seven counties. 98% of Maine's fuel is barged to our terminals in Portland and Searsport.

However, New York, Connecticut and New Jersey are receiving ethanol blended fuel (E10) as they are required to receive RFG in their non attainment areas. New Hampshire also is required to have RFG and is now receiving ethanol blended RFG. However, there is always a possibility of another hurricane, unrest in the Middle East, a refinery going off line or other event that may result in supplies coming from a different source. Therefore, some facilities in Maine, especially those close to the New Hampshire border, may experience a need to adapt to fuel blended with ethanol. This article is presented to assist in adapting to that transition. While we understand Federal ethanol requirements may be relaxed for the summer, we are not sure how this will affect formulations available in Maine. To be on the safe side, here is some information that might help adapt facilities to the use of ethanol blends.

This article provides some basic information on preparing for the introduction of an ethanol-gasoline blended product to tank systems for motor fuel. The primary areas of concern are product cleanliness, materials compatibility, and water control. Failure to adequately address these three areas of concern could lead to tank system failure and/or customer dissatisfaction.

Product Cleanliness

The ethanol in an ethanol-blend gasoline acts as a solvent and may dissolve and/or loosen materials such as bottom sludge and some wall coatings on petroleum storage tanks. The loosened materials will be suspended in the gasoline and may cause pump filters and vehicle fuel lines to clog.

To prevent clogging from occurring, tank owners should conduct the

following two steps prior to receiving the first shipment of an ethanol-blend gasoline:

Empty and thoroughly clean the storage tank. If this cannot be done, vacuum as much sludge and debris off the bottom of the tank as possible, using an external pump.

Install pump filters suitable for removing an expected increase in particulate matter. Contact your product supplier to determine the correct type of filter to use. These special pump filters will have to be

changed frequently during the first few months of an ethanol-blend use. If the special pump filters are not used, retail customers may experience clogged automobile fuel line filters and lodge complaints with your station.

Materials Compatibility

Petroleum storage tank systems designed and installed after 1981 should not experience a compatibility issue due to the introduction of an ethanol-blend gasoline. For those systems installed prior to 1981, the manufacturer should be contacted to determine

compatibility.

Many materials, such as zinc-galvanized metals, Buna-N seals, neoprene seals, urethane rubber elastomers, polyurethane, and alcohol-based pipe dope polymers may not be compatible with the use of an ethanol-blend gasoline. The following three steps are appropriate prior to receiving the first shipment of an ethanol-blend gasoline:

Check with the tank, pump, and piping manufacturers to determine if the material of manufacture is compatible with an ethanol-blend gasoline.

If the tank has been lined, check with the lining company to determine if the lining material and/or adhesive is compatible with an ethanol-blend gasoline.

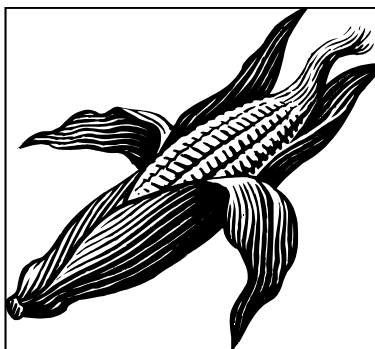
If the interior of the tank has been repaired, check to make sure the area of repair will not deteriorate upon the introduction of an ethanol-blend gasoline.

Water Control

Control of water in the tank system is essential with an ethanol-blend gasoline due to ethanol's affinity for water. An excess of water in the tank may cause the ethanol to partition itself out of the gasoline and into the water. The water level in the tank must be checked prior to the introduction of an ethanol-blend gasoline and frequently thereafter. If water is present in the tank, it should be removed prior to the introduction of an ethanol-blend gasoline. Further, it must be determined how the water entered the system. If the investigation indicates water intrusion is a problem, the cause of the intrusion must be eliminated prior to the introduction of an ethanol-blend gasoline.

To measure water in an ethanol-blend gasoline a special water-finding paste applied to the gauging stick is required. Ask the supplier for

(Continued on page 8)



New Requirements for Motor Fuel Aboveground Storage Tank Facilities with Underground Piping Systems

The Maine Legislature recently adopted legislation (PL 2005, c. 491) that establishes new requirements for underground piping systems at aboveground storage tank (AST) facilities for motor fuel. The law hopes to reduce the risks of oil discharges and the subsequent pollution of groundwater, surface water and drinking water supplies from those underground piping systems. Prior to this law, 38 MRSA §570-K allowed underground piping systems installed at AST facilities prior to June 24, 1991 to remain in service indefinitely, even when not equipped with any leak detection. In contrast, UST facilities with the same design have had to be removed or replaced.

AST facilities with underground piping pose no less risk to the environment than their UST counterparts. For example, in 2003 AST facilities accounted for many more spills resulting in major clean-up costs than UST facilities: there were 90 such spills at AST facilities compared to 50 at UST facilities. For the time period of 1995 – 2003, a total of 1567 spills occurred at AST facilities (excluding home heating oil tanks and marine terminals). Clean-up for these spills cost Maine's Ground Water Oil Clean-up Fund almost \$6 million. While only 37 of those spills (2%) resulted from undetected piping failures, those 37 spills accounted for a disproportionate 25% of the remediation costs incurred by the DEP – the largest single cause of significant oil pollution. Statistics also show that motor fuels, particularly gasoline, are the most costly to clean up when spilled compared to other types of petroleum products.

“AST facilities with underground piping pose no less risk to the environment than their UST counterparts.”

The law, which becomes effective June of this year, requires:

- ⇒ registration of motor fuel AST facilities with underground piping, as is currently required of underground storage tank (UST) facilities;
- ⇒ submittal of annual inspection reports for the underground piping systems at motor fuel AST facilities;



- ⇒ retrofitting of underground piping systems installed at motor fuel AST facilities prior to June 24, 1991 that do not currently meet the DEP's leak detection standards under Chapter 691; and
- ⇒ Submittal of certificates of proper installation for underground piping systems installed at motor fuel AST facilities.

The first deadline, registration of underground piping and their associated AST(s), is January 1, 2007 for non-diesel motor fuel ASTs. Diesel ASTs with underground piping have until July 1, 2009 to comply with the registration requirement. Diesel tanks were given an extended deadline to allow more flexibility for owners transitioning to ultra low sulfur diesel (ULSD) to comply with federal regulatory changes that will require at least 80 percent of diesel refined or imported into the country to be ULSD. Since ULSD may not be stored in tanks also used to store regular diesel, or mixed with regular diesel, some owner/operators may need to physically modify their facilities to accommodate these regulatory changes.

DEP staff are developing a registration form for the affected AST facilities. We will be sending out informational letters and registration forms to facility owner/operators this summer. Registration will allow DEP staff to track ownership, location and equipment changes at AST facilities, as well as to monitor compliance with applicable standards. Few records of these facilities currently exist, and many of the records that do exist are not current.

Submittal of annual inspection reports for underground piping systems must occur by July 1, 2007 for non-diesel motor fuel ASTs. Diesel ASTs have an extended time period until July 1, 2009 to meet this requirement. The purpose of the inspection requirement is the same as with UST facilities: to ensure that underground piping is inspected on a regular basis by a Maine Certified Tank Installer or

(Continued on page 8)

PIPING SUMPS & SENSORS: the Manufacturer's Instructions

Electronic monitoring of double-walled piping is achieved by a three-part system: piping, sump, and sensor. In the event of a leak, all three components must perform as designed in order for the system to effectively contain and detect product.

Since 1991, the Rules for Underground Oil Storage Tank Facilities (06-096 CMR 691 §5(B), 5(D), and Appendix E) have required that secondary containment sumps and sensors be installed and maintained in accordance with the Department's Rules and the manufacturers' instructions. Similarly, the BUSTI Administrative Rules (06-048 CMR c.1 §4(A) (2)(a)) have long required that installers, removers, and inspectors only undertake assignments that they are qualified by education or experience to perform.

Furthermore, many equipment manufacturers require that anyone installing or inspecting their equipment be certified to install, maintain, and trouble-shoot their equipment. The importance of the equipment manufacturers' requirements in the placement of sump sensors has been stressed in the Inspector Reference Handbook since 2003. To complete Section #21 on the current Annual Compliance Inspection report form, "sensors are properly placed," you need to determine if the sensors are placed according to manufacturer's instructions. Generally, that means the probe is secured at the lowest point of the sump and set at true vertical.

Similarly, the equipment manufacturers' requirements are critical to the installation, repair, and maintenance of secondary containment sumps. Sumps integrate the piping and leak detection systems; thus the tightness of the sump, penetration boots, and lid is critical to the systems performance. Section #23 on the current Annual Compliance Inspection report form asks if sumps are in liquid tight condition. This includes inspecting the sumps for seemingly simple issues like cracks or holes in the sump body, lid, or penetration boots, as well as a visual check of the boot seals and clamps.



At least the probe is there. But still, the sump would have to be more than half full for it to work.

Inspections and investigations conducted by DEP staff have revealed that some UST owners, operators, certified installers and certified inspectors may not be aware of the importance of the equipment manufacturer's instructions when installing, operating or repairing a facility.

The take-home message is this: If you're an installer or inspector, please make sure that you are up to date with both the equipment manufacturer's instructions and any manufacturer-required certifications for the equipment you plan to install or inspect before heading out this year.

Andrew Flint is an Environmental Specialist III with the Maine Department of Environmental Protection, Bureau of Remediation and Waste Management, Division of Oil and Hazardous Waste Facility Regulation.



So, Where's the Probe?



At Last; Like It's Supposed to Be.

Report on The 18th Annual National Tanks Conference and Expo; March 2006



In March 2006, I attended the 18th Annual National Tanks Conference and Expo in Memphis, Tennessee. This conference brings together state regulators, EPA staff, industry professionals and others annually to share information on both prevention and clean-up of leaks and spills from underground oil storage facilities.

This brief report of the Annual Tanks Conference is to give you some information about what is happening in the world of Tanks at a national level. Perhaps the most important issue is the passage, in August 2005, of the Federal Energy Act. The Act will impact our lives here in Maine as well as throughout the region and the nation.

Here are just a couple of the items that may be of interest to tank installers and inspectors. Part of the Energy Act will provide guidelines for siting of facilities near water supplies and requiring secondary containment. While Maine has a strict siting law for new facilities, many other states don't. As a result of the Energy Act, it is likely that when dispensers are replaced at a location they will need to have monitored sumps installed under them. Another item of interest is the requirement that tank operators will be required to have training in the operation of their systems. While Maine DEP anticipates becoming directly involved in operator training, it is likely that you, the installer or inspector, will also have a role in this area.

Currently the Federal Environmental Protection Agency (EPA) which is charged with the

oversight of the Tanks program is formulating guidelines for the states regarding the many requirements in the Energy Act. EPA plans to make these available by the end of the summer and at that time staff at the Maine Department of Environmental Protection will be reviewing them and making recommendations for their implementation here in Maine. Please stay tuned for more information.

Some of the other topics covered at the Tanks Conference were Enforcement Tools and Inspections. The Department is looking at a variety of methods to better accomplish compliance with existing regulations. Maine Certified Tank Inspectors and Certified Tank Installers can be proud of the fact that Maine has one of the best programs in the country for certifying people. In January 2006 staff from DEP met with people from two other New England states to provide them with some of the background concerning our certification programs. These states are considering developing similar tanks programs in their states.

Perhaps one of the most interesting topics covered was "Tanks in the Wake of Natural Disasters". The presentation was made by staff people from Florida, Mississippi, and Louisiana and concentrated primarily on the results of last year's hurricanes, particularly Katrina and Rita. A variety of presentations included slides of what happens to your underground facility during a natural disaster. Some of the problems that would occur here in Maine should we have a severe hurri-

cane are blow downs of dispensers and vent pipes. In the case of the dispensers they found that many of the crash valves failed to close. While there was no power so that no product was pumped out of the tanks, water did come into the tanks and caused them to overflow and release product to the surface. Vent pipes also snapped off right at ground level, particularly where there was a transition from fiberglass piping in the ground to steel above the ground. Again, this allowed water to enter the tanks. Another problem was inadequate anchoring of tanks when they were installed. In a few instances the tanks didn't flood; they floated! In some places there was high level of storm surge and when coupled with empty tanks, the tanks simply popped to the surface. The storm surge also moved Above Ground Tanks (ASTs), in some cases many feet which allowed the discharge of their contents to the surface. Fortunately, in some respects, there was such panic to get away from the area, and gas was in short supply, many of these tanks had very little fuel in them.

I hope that this brief article has given you some insight into happenings at the national level and, should you have questions about national policy and how you may be affected, please feel free to contact Oil Enforcement Unit staff.

Timothy Rector, Environmental Specialist III, Maine Department of Environmental Protection, Bureau of Remediation and Waste Management.

"While Maine DEP anticipates becoming directly involved in operator training, it is likely that you, the installer or inspector, will also have a role in this area. "

News Flash — Electronic Inspections

By June 30, 2006, the Underground Tanks Unit will have available, on the Department of Environmental Protection website, a “clickable” version of the current Annual Tank System Inspection report. This downloadable form will make it possible for you, the installer or inspector, to load a copy of the Adobe PDF file to your own computer and then fill the form out in the field by simply clicking on the boxes. The areas that you fill in

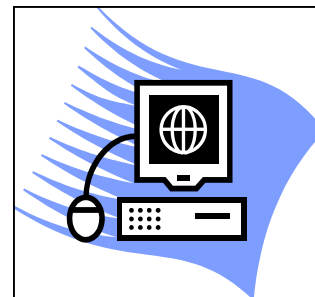
with the name of the facility, owner, registration number, etc. also can be filled out by simply typing in the data. You will also have the ability to type in the comments section.

After filling out the document it can be printed, signed and dated and sent to the owner/operator and the Department.

The advantage of using this form for you is the speed with which you can complete an inspection. For the Department staff who review the In-

spections when they are submitted, they will be legible and much easier to read. Your customers will also find them easier to review.

Thank you for using the new forms! And please remember that starting JULY 1, 2006, ALL inspections must be on the 2006 -2007 version of the inspection form, which can be identified by the “Rev 02/2006” in the lower right corner.



Examination Results

The Board of Underground Storage Tank Installers conducted an examination on March 30.

Three applicants passed the inspector examination and now hold certificates as underground tank inspectors. Those individuals are:

- ⇒ Thomas Carleton of C.N. Brown;
- ⇒ Dale Emery of County Environmental; and

- ⇒ Michael Polley of G.R. Adams;

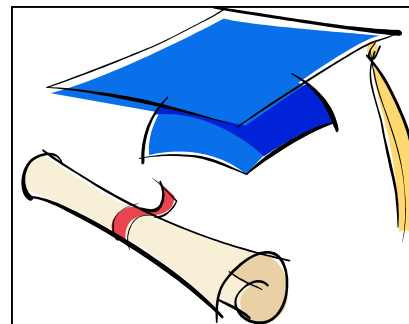
Two applicants passed the Class 3 final examination and are now qualified to install number 2 heating oil tanks for the on-site consumption of oil. They are:

- ⇒ Daniel Harmon of Les Wilson and Sons; and
- ⇒ Michael Lewis of Petroleum Maintenance Systems

One person, Matthew Doughty of Enpro Services, passed the written examination for underground gasoline tank remover and is eligible to take the on-site examination.

Congratulations to all the successful applicants.

And welcome.



Training Available

Thanks to everybody who attended the training sponsored by DEP and BUSTI on March 1. We hope you found it informational and enjoyable. In addition to that, BUSTI approved individual credit for two installers. Additionally, the Board approved or renewed credit for the following programs:

- ⇒ Veeder-Root Level 4 Certification, sponsored by John W. Kennedy Com-

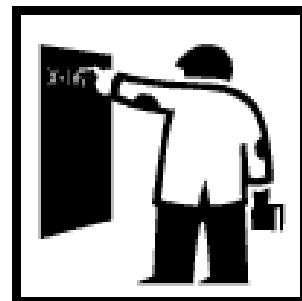
- pany for 2 hours;
- ⇒ HAZWOPER 40 hour safety training, conducted by the Maine Labor Group on Health for 8 hours;
- ⇒ “Operation Underground.” a self study program by the American Petroleum Institute for 3 hours (installation module) and 2 hours (removal module);

- ⇒ HAZWOPER 8 hour safety refresher training for 3 hours, sponsored by

Safety Communications; and

- ⇒ UST Cathodic Protection Tester Certification for 6 hours, sponsored by the Steel Tank Institute.

Certified installers and inspectors should have received materials on all these offerings. However, contact Board staff at 207/287-2651 for further information, and monitor our web site for additional offerings.



Maine Department of Environmental Protection

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New AST Requirements (Concluded)

(Continued from page 4)

Inspector and properly maintained. We will be reviewing the existing annual inspection forms for UST facilities to determine what, if any, revisions should be made to accommodate the inspection requirements for motor fuel AST facilities.

The deadline for retrofitting underground piping systems lacking leak detection systems so that they meet current leak detection requirements under Chapter 691 is January 1, 2011 for all motor fuel AST facilities. Those motor fuel AST facilities that lack leak detection will be required to replace any single-walled piping systems with double-walled piping,

install continuous leak detection systems, and if a pressurized pumping system, install line leak detectors. The only exception would be so-called "safe suction" systems, rarely found at AST facilities since they require dispensers to be elevated above tanks. If you have a motor fuel AST facility that lacks leak detection but you believe it is a "safe suction" system please contact Department staff to verify whether or not the system meets the Department's definition of "safe suction."

Starting in August 2006, on the effective date of the new legislation, motor fuel AST facility owners will be required to ensure installers submit "certificates of proper installation" within 30 days

of installing underground piping systems at their facilities. The certificates must be signed by the certified tank installer who did the installation, attesting that the installation was completed in compliance with the DEP's statutes and regulations.

Facility owner/operators, consultants, tank installers and others with questions about these new requirements for motor fuel AST facilities may contact Sara Brusila at: Maine DEP, BRWM, Div. of Technical Services, 17 State House Station, Augusta, ME 04333-0017; telephone: (207) 287-4804 or in-state toll free at 1-800-452-1942; e-mail: sara.brusila@Maine.gov.

Ethanol (concluded)

(Continued from page 3)

a paste designed to detect water in ethanol-blend gasoline. Check the directions to determine what each resulting color means, i.e., is water present or has phase separation occurred.

Install alcohol sorbing filters on the dispensers. These water sensitive filters will attempt to absorb water that is present. If the filter's capacity is exceeded, the filter will slow the flow of gasoline to a very low rate or stop it entirely. The filter will then have to be changed.

